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Rochester Institute of Technology

**A Thesis Submitted to the Faculty of
The College of Imaging Arts and Sciences
in candidacy for the degree of
Master of Fine Arts**

**See a new movie
- concepts of the future movie theater**

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Date: _____ 8/16 2002

A B S T R A C T

This thesis itself is designed to be a 'DVD movie' style game, and the movie genre is documentary. The subject matter is my graduate classmates in the Computer Graphics Design department. The target audience of this thesis, based on the movie content and the level of navigation, is high school and over and the computer experience level is intermediate. This thesis offers a concept of how to instruct the movie audience to know better about a new way of seeing movies. Furthermore, by using this program, the audience will find extra fun from this new entertainment.

The reason I chose to shoot my classmates is not only to have a record of this time in grad school but also because more and more documentaries are done with digital video by professional filmmakers these days movie.

The end purpose of this program is for use in an e-cinema of the future. Inside the e-cinema, you can see a lot of laptops in front of every seat and possibly more than one movie screen. This would depend on the program design and the content of the movie. This program can also be used at private homes delivered by Internet service or audiences may be able to rent it at an e-blockbuster" in the future.

I N S P I R A T I O N

My inspiration were movies, computer graphics and the entertainment industry. If my career could revolve around these three factors, I would never get bored.

INTRODUCTION

problem statement

"The cinema is an invention without a future."

-- Louis Lumiere

This thesis project will show you a form of future entertainment. On December 28, 1895, Auguste and Louis Lumiere are credited with the world's first public film screening. The showing of approximately ten short films lasting only twenty minutes in total was held in the basement lounge of the Grand Cafe on the Boulevard des Capucines in Paris. As we look back in retrospect, in comparison to what film has developed into today, the Lumiere Brothers believed it to be a medium without a future as they suspected that people would bore of images that they could just as easily see by walking out into the street. However, their film sequence of a train pulling into the station reportedly had audiences screaming and ducking for cover, as they believed that the train itself was about to plow into the theater. The audience has been excited by the film industry ever since then.

Ironically, the form they set up, a bunch of people gathering together, (indoors or outdoors) watching the same screen for a certain period of time, has never changed since 1895.

How do you see a movie today? Go to a theater, pick a movie, buy a ticket, get a seat, watch the screen, 2 hours pass and the movie ends, you go home. What you have got? Visual astonishment and good story-telling. Of course. Is that enough for movie audiences of the future? Absolutely not! Digitalization and computer technology are supposed to bring us more.

When we talk about digital evolution, this not only means that we have the ability to make movies at a very low cost, but it also offers various types of entertainment we could have in the future. Imagine individual movie audiences making their own movie in the theater. After paying for the ticket, the audience not only picks which movie title they want to see but also what section, which character and for how long ? When you see "AI" today, it is different from what you saw yesterday (your choice today is different from

yesterday). What I know about "AI" may be completely different from what you know. But "AI" is definitely directed by Steven Spielberg. The fun is that we, as the audience decide what we want to see and what we don't. Therefore, "A.I" can be 2 hours long or just a half hour short.

This thesis project will present a concept of how to see a movie in the future. Not only do movie audiences get some sense of involvement from this new entertainment but also professional movie makers can rethink their work from many directions. What makes this possible? Computer technology.

objective

Creating a new process of seeing a movie in the future and designing a precise instrument for users to understand how to use this program. This nre entertainment should keep the fun of sitting in the theater and enjoying the good script and the visual astonishment. Audiences should find the extra fun and the sense of involvement by using this new mode.

target audience

Gender : Male-Female
Age : 18-75
Education level : High School
Computer Experience : Intermediate

end product

A user interface screen which provides the movie audience a choice list. Also a compiled movie clip which is based on user's list.

Deliverable medium : CD-R
Target Computer : Desktop/Laptop
Platform : Macintosh and PC

REVIEW OF LITERATURE

Movie is not a new term but interactive movie is definitely a new toy for movie audience to play around. I tried to make a border for my thesis topic and started with searching the simplest concept of movie and film, then went deeper to see what the "interactive movie" is and checked every multimedia sources about movie and film. I must say there have not much solid theory which support my concept of future movie but this new entertainment mode would be developed because of the changing of computer technology and the insatisfaction of audience, One thing I should mention is in this time I apply a lot of concepts from the magazine that everybody can see in the regular book store because of the idea in those periodical is the most updated.

1. I saw the title question on Sight and Sound , which gave me a lot of inspiration of how to present the concept of movie in this thesis and brought me the new vision of the tool such as digital camcorder which be used in the movie today. Actually this question followed by a lot of answers provided me many ideas of what is documentary film, what is new movie and how filmmakers today see the tool they use, etc..

(p.20 ~p.24 Oct 2001)

Low-budget digital film-making is here to stay and some directors love it. But what are the consequences for British cultural films if DV is the only option? Nick James asks five filmmakers, one writer and a film council funder if it really is "digital or die?"

..at the Bristol roadshow I saw a little e-cinema-a room with low benches and a big white screen and they plugged in a laptop and that was it. The quality was astounding. But I'm worried that nobody is thinking about how DV film need to be projected.

..so to sum up, what are the advantages of DV? It's easy to carry, you can shoot for a long time. It's cheap. It's liberating to be able to say "let's try this, let's try that ", and to keep working until you've run out of steam and then to move on to the next scene. Then to sit in the editing suite weeks later and be surprised how much footage you have to cry over.

2. "Directing the documentary " is a book discuss a lot about modern concept of film, not only specific in documentary film but also apply to other movie genre. In this book, I also found the topic about the concept of the relationship between film and other media such as TV and Internet, which push me to think further and form my basic structure of this

thesis. (Michael Rabiger / focal press/1998)

(p.12)

Bear witness - If you have investigated local records in search of your forebears, you have probably found only names, occupations, births, marriages deaths and little else about the genetic heritage you carry. I would love to know more about a particular branch of my family who in the nineteenth century were village chimney sweeps just north of London, only two pieces of information evocative in their contradiction, have been handed down : that the boys had saltpeter rubbed into their torn knees and elbows to toughen the skin ready for brutal job of climbing inside chimneys, and that the family believe itself descended from nobility. how much is authentic i can't say, but one universal fact stand out : ordinary people know virtual nothing about the lives and minds of their progenitors, especially if poor and illiterate. The great mass of humanity has left nothing save what can be glimpsed in the records of their time and folk music and cautionary sayings..... You and I need not pass so silently from life, future historians will has as their resource documentaries that are grassroots vision, not just what was preserved by and elite and its servants.

(p.34)

As electronic publishing on cable, by satellite, and through the Internet becomes more extensive , and more responsive to minority interests, there will be an increased demand for personal film about actuality and for films with imaginative and committed authorship. The medium needs new products, new approaches, and new voices.

PROCESS

pre-production

Finally I made up my mind to combine the movie performance and multimedia interactivity as my main topic. The next thing was how to present the movie element in this thesis. Should I use a movie clip that I can borrow from a library or a store or should I create my own movie? Although it would save time if I used movie clips that were edited by professional filmmakers, personally I preferred to make up my own story and film my characters.

In order to find material which supported the idea of filming my own movie, I checked my old textbooks, which I used for my undergraduate film class. I had my first formal film introduction class in 1997 and was impressed by the visual varieties and the story-outline which were developed after Auguste and Louis Lumiere in 1895. As far as how moviemakers make movies, I happened to read an article in Sight and Sound talking about "could you imagine having done a film in the traditional way-developing the script, raising \$5 million, shooting on 35mm and maintaining complete control? In the end you made it in 12 days for \$1,000,000..." and paragraph was "we shot 120 hours of DV footage, knowing 90 percent of it would go in the bin".

When talking about digital revolution, that not only means the professional filmmakers could make their movies with very low cost but it also means everybody can have the privilege of making their own movie. This digital revolution not only affects how the professionals make movies but also how audiences think about movies.

Broadcast level equipment is now affordable. When audiences have the power to film their own movies with this broadcast and have different expectations when entering the theater, what kind of story will result? It reminds me of a question my film production professors always asked us in lecture: fiction or non-fiction. Now I ask myself, fiction or non-fiction? What kind of story can make my thesis entertaining and have theory to support it?

Everything non-fiction is documentary. Making a documentary of a group classmates is

an ideal medium to express my concept of a movie and to design a program that allows audiences to play editor.

Design Considerations - In this stage, my design consideration would focus on the overall tone of my final product. Since I already decided on my movie content(the life of my classmates inside/outside the computer lab), I thought it might be best to make my whole design direction follow this.

Sitting before my Mac , I looked at my classmates and the environment around me. What color, what shape, and what layout should I include to show the concept of the CGD lab. Monitor "Blue". Mac "Blue". Theater Screen "Black". I chose these for the three basic color concepts. Regarding the font, I wanted to make it as easy to read as possible. For the shape, I applied a lot of "squares" and "rectangles" to give the sense of a monitor and screen. This is my very first thought of the visual performance of this thesis.

Production & post- production

The production and post-production can work simultaneously. I spent 2 quarters to film ten of my classmates. At the same time, I output the footage to the computer for digitizing. The first problem I encountered was the monster file size of the video. If I spent an hour to film per person, I needed around 10GB hard disc memory to store my non-compressed footage. When editing, at least one more Gigabyte is needed for each person. In the end, the total file size would to be about 110 GB and that I didn not expect at the very beginning. In the meantime, I started to design the interface of the program and think about how to navigate. The above work was on schedule in the first 2-quarters and I met with the chief adviser each week to make sure I control the working timeline efficiently.

At the beginning of the spring quarter, I still had time to fix my interface and edit my video and try to solve the programming problems. But at this time, I already stopped shooting and was focusing on working on the computer. I classified people as different QuickTime movies and put all of these movie in Director and programmed in Director

Lingo. From week 3, I started testing and continued to solve the programming problems.

Design Considerations - In this stage, my consideration are both for video and multimedia design.

Video design - Considering the file size and the convenience of story telling, I made a little introduction film for 10 characters, around 25 to 30 seconds for each. According to the different aspects of their lives, I made at most four movie clips for each person. I tried to use the video image to tell the different personality of each my classmates and their general personal image from my point of view.

For about 3 months (almost the whole winter quarter), the only thing I did was carry my Sony digital camcorder and follow and record of each my classmates. The only computer work I did at this time was just output and classify the footage. I found out there were too many different stories that happened to different people. Although most of our lives involved the computer lab, there was too much diversity. To make my video image present a certain consistency, I tried to find one common movie clip for everyone. Suddenly, I discovered everybody has one common motion, everybody opens the door, which (to me) is like an opening of a movie. What would happen next is unknown for the audience. An opening is definitely essential to a movie, no matter how short the movie is.

As for the rest part of the movie, I tried to capture the unique personality of everyone and put the interaction between different people. Also cover different aspects of life such as family life, habit and past experience for each character.

Multimedia design - The design considerations here focused on how to make my QuickTime movie screen stand out on the Director movie stage and how to make users easily navigate my program. In order to provide various styles of user interactivity in my program, I designed a slider, a "drag and drop" button and the mouse click for users to play with.

The main navigation of my program would be the slider bar on the bottom. Users should follow the instructions and steps of the slider to make this program function correctly. If users don't follow the steps guided by the slider, a lingo error message appears and users should find the "quit" or "restart" button to restart the program. To make the users choose and edit their own movie clip, I designed the "drag and drop", users should drag the image to the area on the slider and release the mouse to complete the choice. Main buttons such as "quit" and "restart" are designed to work as "double clicks".

To simplify my program, I set up the image to only change in the middle of the Director stage. As I mentioned before, I want to present the tone of the computer lab and the theater. To get this, I used mainly blue and black & white colors tone. The change of images would be depend on how users pick the movie clips they want to see and follow the different steps according to the instructions on the slider bar.

Technical issues

When looking back at the whole working process, I would divide my work into two main parts.

At first, I tried many techniques using the digital camcorder. Because I realized the huge file size I would be creating, I tried numerous compressions in different software and discussed it with people from other fields. Limited by the fact that my final project would be assembled in Director and only QuickTime movies can be controlled appropriately by Director, I made all my movie clips QuickTime files. After the final compression in Media Cleaner, the file sizes are relatively small and the play delay I expected to happen in Director was never an issue.

The second part in my work would be how to combine the movie and multimedia efficiently. The lingo skill I used is the "drag and drop", drag the image into the target area and release the mouse. Another lingo skill is how to recognize the image (the movie clip) which the user dropped in the target area. When the program recalls the

image in target area, how the program would play the corresponding movie clip in the target area. The lingo I used to ask the program to remember this is basically the "name convenient" technique in Director. (see the lingo script on APPENDIX A)

Trouble-shooting

The main problem I had for this thesis project was still on the programming. In some point, I had to adjust my graphical design to enable the lingo work correctly.

To make the "drag and drop" work both functionally and aesthetically, not only the user should be able to drag the image and put the image in the target area but also when entering the target area, what users drag now should become a different image. Graphically, I designed several set of images for people to swap the image, and use several set of related name-convenience to make my program work. Because of the numerous images I had, sometimes the lingo would do the weird thing and hard to find the way to fix it. I would just delete all the work I had so far and redo it again if the program had too many errors at one point.

For the navigation "slider", I got the idea from my in-class practice. The concept and the lingo use should be pretty straight forward, simply restrict the X-axis and Y-axis and put the invisible box on it as my target area. One thing I noticed is if the users didn't follow the precise step, the program would crash easily. For this aspect I am not sure whether it is good for a game.

User testing

At the thesis show, I noticed the first thing that caught people's attention about my thesis was that "hey, these characters are the people showing today. At first users had no idea how to make this program work. They just wanted to click the play" button and see the movie as usual. When they realized they can choose what character they are really interested in, despite the long line behind them, it made them understand one of the benefits of this program. You can see what you want without spending extra time and annoying the people in line behind you.

VISUALS

Director Movie

I designed three main sections in my Director game

Section 1 is a brief introduction about this thesis.

Section 2 is a main part of this thesis, all my concepts are visualized here, and link all the Quicktime movie in this section. In section 2, I designed 4 pages for better navigation.

Section 3 is a credit page, I credit the softwares I used and the people who help and inspire me on this thesis.

1. Size
800*600

2. Color
Background : black

In order to create a sense of theater I choose Black as my background color.

others : blue

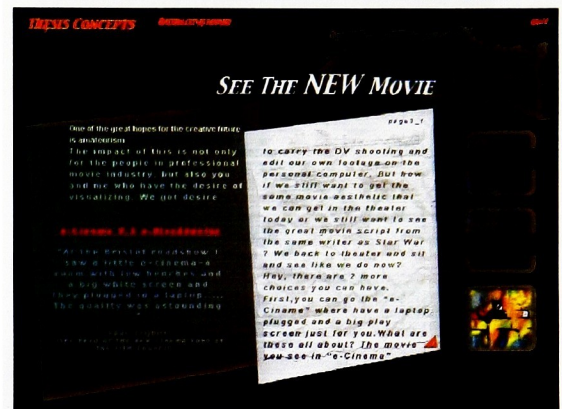
Because my movie story is about the department of Computer Graphic Design I used blue to create a sense of computer monitor.

3. Typography
(shown as section 2 on the right)

Capital (area 1 & area 3)

Ariel black (area 2)

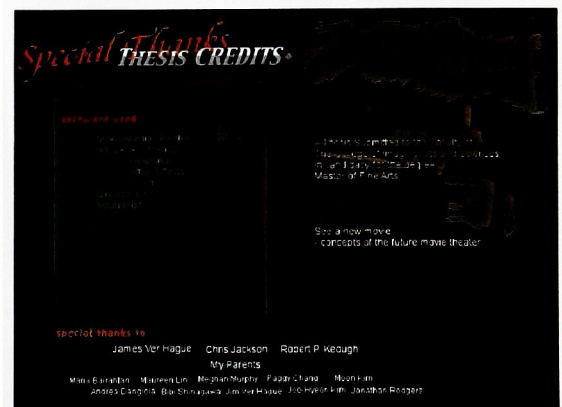
Section 1



Section 2



Section 3



VISUALS

Quicktime Movie

I link all the Quicktime movies and put them in section 2 of the Director movie. There are 4 different pages in section 2. Users should follow the navigation scroller on the bottom of section 2 to execute this program and see the movie.

1. Size

320*240

2. Movie genre

documentary

3. character

Andrea Dangiola

Meghan Murphy

Paggy Chang

Jonathan rodgers

Maureen Lin

Maria Bairhtan

Joo-Heon kim

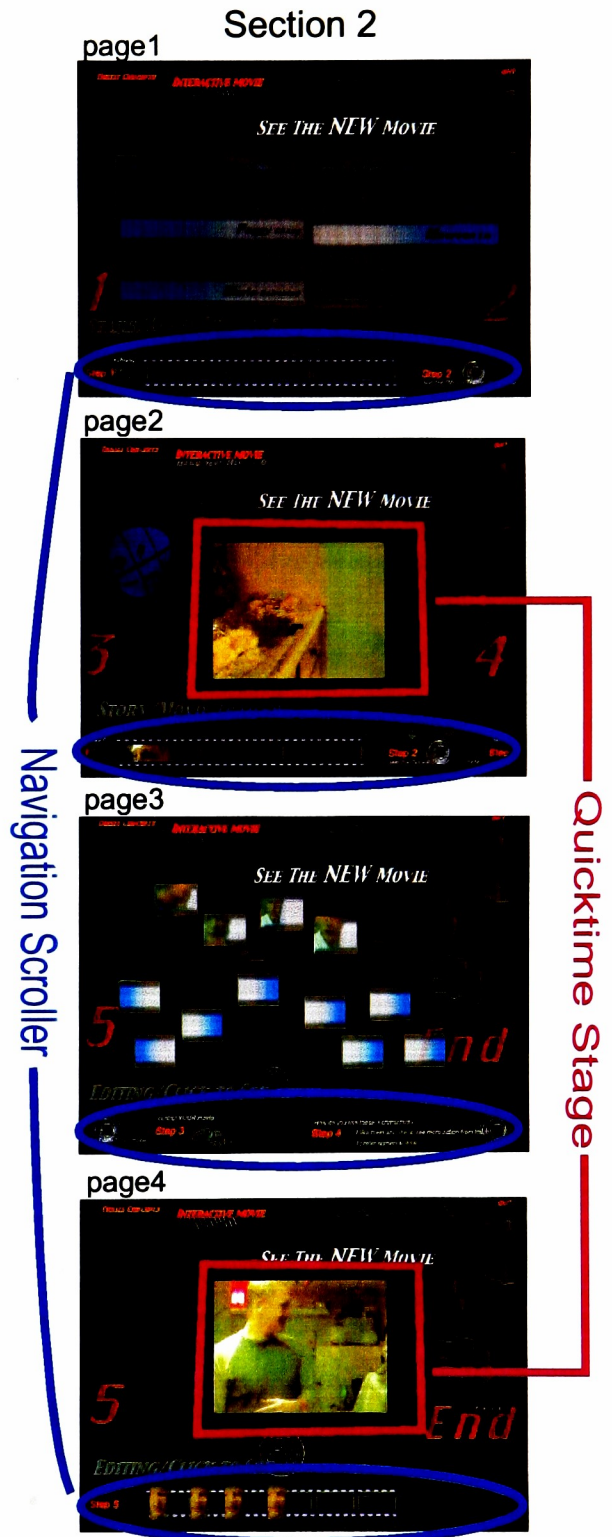
Moon Kim

Jim Ver Hague

Bibi Shinagawa

4. Story Summary

A group of computer-art lovers. Talking and acting of life outside and inside computer lab.



CONCLUSION

The Movie, in this thesis, is a tool. I can not predict how different and advanced movies will become in the future. The real challenge for me in this thesis is how to design and program a user-friendly computer game, which instructs audiences to get what they might expect in a theater of the future. In order to present this future concept efficiently, I chose to make a documentary because it lends itself well to digital video and it is also meaningful to my personal life.

What is a documentary film? John Grierson labeled the non-fiction film "Nanook of the North" as a "documentary" because it was an example of the "creative treatment of actuality." What is meant by "creative" varies widely among filmmakers. Should a documentary only display actual people and events, giving the straight story without the addition of drama, aesthetics, actors, etc.? Film makers like Robert Flaherty believed it was acceptable to add fiction to documentaries, as long as the effect on the audience was real. It was content that mattered most and not the method. Editing, narration, and musical scores would be peripheral to the chosen subject matter. The result would be what Flaherty's wife, Frances, termed a "film of discovery and revelation achieve something in addition to entertaining discovery and revelation that achieves something, in addition to entertaining audiences and making money."

Considering all the elements of a documentary, I wanted to make a documentary, and as a computer graphics designer, I have an additional task to reach. Making a documentary I might be able to just express the reality and disregard how audiences think. However designing a computer program, I will not succeed without considering all the needs of the user.

I must say that most of the time computer programming is like a game for me. I say this not only because most of the time my programming is game-oriented, but also because of the process that I use with the idea, the graphics and the code. There was a goal I needed to reach and a good program would get me there. However, one thing I would always keep in mind are the needs of users. Here, I combined the best elements to create my concept of seeing a movie in the future. I am sure there will always the one-year working process from zero to completion. As for how and when my work can come true, it is just a matter of time.

APPENDIX A . L I N G O S C R I P T S U S E D

I used two playlist lingo skill in this thesis ,this is the code for the second one,which is logner.The basic concept are the same for both two list :

```
global newclip,newplayList
property spriteNum
on beginsprite me
  repeat with i = 1 to 12
    sprite(180 + i).visible = true
  end repeat
end
```

```
on mouseup me
```

```
  repeat with target = 201 to 206
    if sprite spriteNum intersects sprite target then
```

```
      sprite(spriteNum).visible = false
      sprite(spriteNum).locV = sprite(spriteNum).locV + 200
```

```
    if spriteNum = 181 then
      sprite(target).member = member( sprite(181).member.name && "image")
```

```
      sprite(target).getIT= sprite(181).member.name && "sMovie"
      put sprite(target).getIT
    else if spriteNum = 182 then
      sprite(target).member = member(sprite(182).member.name&& "image")
      sprite(target).getIT=sprite(182).member.name&& "sMovie"
      put sprite(target).getIT
      --      newplayList.add ( newclip &&"2"&& "sMovie")
```

```
    else if spriteNum = 183 then
      sprite(target).member = member( sprite(183).member.name&& "image")
      sprite(target).getIT=sprite(183).member.name&& "sMovie"
      put sprite(target).getIT
      --      newplayList.add ( newclip &&"3"&& "sMovie")
```

```
    else if spriteNum = 184 then
      sprite(target).member = member( sprite(184).member.name&& "image")
      sprite(target).getIT=sprite(184).member.name&& "sMovie"
      put sprite(target).getIT
      --      newplayList.add ( newclip &&"4"&& "sMovie")
    end if
```


L I N G O S C R I P T S U S E D

```
end if  
end repeat
```

```
repeat with target = 201 to 206  
  if sprite spriteNum intersects sprite target then
```

```
    sprite(spriteNum).visible = false  
    sprite(spriteNum).locV = sprite(spriteNum).locV + 200
```

```
  if spriteNum = 185 then  
    sprite(target).member = member( sprite(185).member.name&& "image")  
    sprite(target).getIT=sprite(185).member.name && "sMovie"  
    put sprite(target).getIT  
    --      newplayList.add ( newclip &&"1"&& "sMovie")  
  else if spriteNum = 186 then  
    sprite(target).member = member( sprite(186).member.name&& "image")  
    sprite(target).getIT=sprite(186).member.name&& "sMovie"  
    put sprite(target).getIT  
    --      newplayList.add ( newclip &&"2"&& "sMovie")  
  else if spriteNum = 187 then  
    sprite(target).member = member( sprite(187).member.name&& "image")  
    sprite(target).getIT=sprite(187).member.name&& "sMovie"  
    put sprite(target).getIT  
    --      newplayList.add ( newclip &&"3"&& "sMovie")  
  else if spriteNum = 188 then  
    sprite(target).member = member( sprite(188).member.name&& "image")  
    sprite(target).getIT=sprite(188).member.name&& "sMovie"  
    put sprite(target).getIT  
    --      newplayList.add ( newclip &&"4"&& "sMovie")  
  end if
```

```
end if  
end repeat
```

```
repeat with target = 201 to 206  
  if sprite spriteNum intersects sprite target then
```

```
    sprite(spriteNum).visible = false  
    sprite(spriteNum).locV = sprite(spriteNum).locV + 200
```

L I N G O S C R I P T S U S E D

```
if spriteNum = 189 then
    sprite(target).member = member( sprite(189).member.name&& "image")
    sprite(target).getIT=sprite(189).member.name&& "sMovie"
    put sprite(target).getIT
    --      newplayList.add ( newclip &&"1"&& "sMovie")
else if spriteNum = 190 then
    sprite(target).member = member(sprite(190).member.name&& "image")
    sprite(target).getIT=sprite(190).member.name&& "sMovie"
    put sprite(target).getIT
    --      newplayList.add ( newclip &&"2"&& "sMovie")
else if spriteNum = 191 then
    sprite(target).member = member( sprite(191).member.name&& "image")
    sprite(target).getIT=sprite(191).member.name&& "sMovie"
    put sprite(target).getIT
    --      newplayList.add ( newclip &&"3"&& "sMovie")
else if spriteNum = 192 then
    sprite(target).member = member( sprite(192).member.name&& "image")
    sprite(target).getIT=sprite(192).member.name&& "sMovie"
    put sprite(target).getIT

    end if
end if
end repeat

end
```


APPENDIX B . BIBLIOGRAPHY

Web Source

::http://www.att.virtualclassroom.org/vc98/vc_17/button3.htm

This personal website offer the concept of multi-ending scripts, which is the most basic way to develop the concept for users to interact with the writer.

::http://www.acm.org/sigs/sigmm/MM98/electronic_proceedings/nakatsu/#outline

This website contain the academic reference about the Interactive Movie System with multi-person participation and Anytime Interaction Capabilities by Ryohei Nakatsu, Naoko Tosa, and Takeshi Ochi.

::<http://www.442nd.com>

The website of a digital production studio provides good examples of low budget and professional digital movie production

CD-ROM

::Sci Fi Movie Machine: CD-ROM for Windows/Mac (dual platform disc)
1996 By TDC Interactive

This material discusses the concept of taking the director's seat in the Sci-Fi Movie Machine and creating within the cinema of science .

Video

::Run Lola Run (1999)

Directed by Tom Tykwer

This movie presents an image of multi-endings with actors and actresses, non-animation.

DVD

::Fight Club (1999)

Directed by David Fincher

This movie DVD provide an ideal user interface.

Book

::Directing The Documentary (1998)

Michael Rabiger / Focal Press

Detail the process of making a documentary film and concept of overall film language.

::Digital Moviemaking (1998)

Scot Billups / Michael Wiese Productions

The content of this book as the subtitle "a butt-kicking, pixel twisting vision of the digital future and how to make your next movie on your credit card ", provide the concept of how to make a cheap digital movie.

